

Notice of Allowability

Application No.

10/708,101

Applicant(s)

YEN, YAO TUNG

Examiner

John B. Vigushin

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 01 Jun 2006.
2. ☒ The allowed claim(s) is/are 1-17, 19 and 20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. The present Office Action is responsive to Applicant's Amendment filed June 01, 2006. The Examiner acknowledges the amendments to Claim 9 and the cancellation of Claim 18. Claims 1-17, 19 and 20 remain pending in the instant amended Application.

Allowable Subject Matter

2. Claims 1-8, 9-17 and 19-20 have been allowed.

3. The following is an examiner's statement of reasons for allowance:

4. Claim 9 has been amended for minor adjustments of claim language and to incorporate the allowable subject matter of cancelled Claim 18.

5. The reasons for allowance of base Claims 1, 9 and 19 are clear from the statement of allowable subject matter on p.8, section 11, of the Examiner's Office Action of March 21, 2006.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

7. Claims 19-20 in the instant allowed Application have been renumbered as Claims 18-19, respectively, for publication in the issued patent.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Chu et al. (US 6,542,393 B1) discloses an interposer 60 with peripheral printed conductor pads 40 and 52 interconnected by conductive vias 41 at the edges of the interposer 60. Interposer 60 connects upper chip 12 to lower chip 22 by peripheral pads 40, 52 and edge vias 41, and has no other interconnection wiring; requiring none (Figs. 6A,B, 7A,B and col.5: 11-17; similarly, Figs. 9A,B and col.6: 25-35).


b) Pierson et al. (US 5,818,107) discloses stacked chips 19 with conductive metallization 14 printed around the edges and used to interconnect the chips with each other (Fig. 2 and col.5: 27-41; Figs. 13 and 15: col.12: 58-62 and col.13: 52-col.14: 20). Only one adapter card 18 (Figs. 2 and 13), or 151 with edge metallization 115 (Fig. 15), is associated with a stack of chips mounted on it. Pierson et al. does not teach the combination of an intermediate adapter card, a bottom adapter card and BGA devices mounted on both of the adapter cards, the contact arrays on the adapter cards, matching the footprints of the BGA devices mounted to them, respectively, and the adapter card wiring to route electrical connections to the respective peripheries of the adapter cards.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B. Vigushin whose telephone number is 571-272-1936. The examiner can normally be reached on 8:30AM-5:00PM Mo-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


John B. Vigushin
Primary Examiner
Art Unit 2841

jbv
August 04, 2006